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APPLICATION CERTIFICATION FCC Part 15C On Behalf of XIAMEN COMFORT SCIENCE & TECHNOLOGY GROUP CO., LTD

Massage Chair Model No.: EC-622B, OS-Pro Omni

FCC ID: YMX-EC622B

Prepared for : XIAMEN COMFORT SCIENCE & TECHNOLOGY GROUP CO.,

LTD

Address : NO.168, QIANPU ROAD, SIMING DISTRICT, XIAMEN, FUJIAN,

CHINA

Prepared by : Shenzhen Accurate Technology Co., Ltd.

Address : 1/F., Building A, Changyuan New Material Port, Science & Industry

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Report No. : ATE20172033 002
Date of Test : January 15, 2018
Date of Report : November 4, 2017
Date of Report : January 17, 2018





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Test Report Certification

Applicant: XIAMEN COMFORT SCIENCE & TECHNOLOGY GROUP CO.,

LTD

Manufacturer: XIAMEN COMFORT SCIENCE & TECHNOLOGY GROUP CO.,

LTD

EUT Description: Massage Chair

Model No. : EC-622B, OS-Pro Omni

Trade Mark : n.a.

Measurement Procedure Used:

Data of Tast .

FCC Rules and Regulations Part 15 Subpart C Section 15.247: 2017 ANSI C63.10: 2013

The EUT was tested according to DTS test procedure of Apr 05, 2017 KDB558074 D01 DTS Meas Guidance v04 for compliance to FCC 47CFR 15.247 requirements

The device described above is tested by Shenzhen Accurate Technology Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.247 limits. The measurement results are contained in this test report and Shenzhen Accurate Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Shenzhen Accurate Technology Co., Ltd.

January 15, 2018

| | January 13, 2010 |
|--------------------------------|-------------------------|
| Date of Report of Rev. 1: | November 4, 2017 |
| Date of Report of Rev. 2: | January 17, 2018 |
| Prepared by : | (Balland, Conservation) |
| Approved & Authorized Signer : | 2 APPROVED TO |
| | (Sean Liu, Manager) |



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1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT : Massage Chair

Model Number : EC-622B, OS-Pro Omni

(Note: We hereby state that these models are identical in interior

structure, electrical circuits and components, and just model names are different for the marketing requirement. So we

prepare the EC-622B for test.)

Trade Mark : n.a.

Bluetooth version : BT V4.0 LE

Frequency Range : 2402MHz-2480MHz

Number of Channels : 40 Antenna Gain : 2dBi

Antenna type : PCB Antenna

Power Supply : AC 110-120V; 60Hz

Modulation mode : GFSK

Applicant : XIAMEN COMFORT SCIENCE & TECHNOLOGY

GROUP CO., LTD

Address : NO.168, QIANPU ROAD, SIMING DISTRICT,

XIAMEN, FUJIAN, CHINA

XIAMEN COMFORT SCIENCE & TECHNOLOGY

Manufacturer : GROUP CO., LTD

NO.168, QIANPU ROAD, SIMING DISTRICT,

· XIAMEN, FUJIAN, CHINA

Date of sample received: January 10, 2018
Date of Test: January 15, 2018

Sample No. : 1701620

Address



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1.2. Carrier Frequency of Channels

| Channel | Frequeeny (MHz) | Channel | Frequeeny (MHz) | Channel | Frequeeny (MHz) | Channe 1 | Frequeeny (MHz) |
|---------|-----------------|---------|-----------------|---------|-----------------|----------|-----------------|
| 0 | 2402 | 10 | 2422 | 20 | 2442 | 30 | 2462 |
| 1 | 2404 | 11 | 2424 | 21 | 2444 | 31 | 2464 |
| 2 | 2406 | 12 | 2426 | 22 | 2446 | 32 | 2466 |
| 3 | 2408 | 13 | 2428 | 23 | 2448 | 33 | 2468 |
| 4 | 2410 | 14 | 2430 | 24 | 2450 | 34 | 2470 |
| 5 | 2412 | 15 | 2432 | 25 | 2452 | 35 | 2472 |
| 6 | 2414 | 16 | 2434 | 26 | 2454 | 36 | 2474 |
| 7 | 2416 | 17 | 2436 | 27 | 2456 | 37 | 2476 |
| 8 | 2418 | 18 | 2438 | 28 | 2458 | 38 | 2478 |
| 9 | 2420 | 19 | 2440 | 29 | 2460 | 39 | 2480 |

1.3. Special Accessory and Auxiliary Equipment N/A



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1.4.Description of Test Facility

EMC Lab : Recognition of accreditation by Federal Communications

Commission (FCC)

The Designation Number is CN1189 The Registration Number is 708358

Listed by Innovation, Science and Economic Development

Canada (ISEDC)

The Registration Number is 5077A-2

Accredited by China National Accreditation Service for

Conformity Assessment (CNAS)

The Registration Number is CNAS L3193

Accredited by American Association for Laboratory

Accreditation (A2LA)

The Certificate Number is 4297.01

Name of Firm : Shenzhen Accurate Technology Co., Ltd.

Site Location : 1/F., Building A, Changyuan New Material Port, Science

& Industry Park, Nanshan District, Shenzhen, Guangdong,

P.R. China

1.5.Measurement Uncertainty

Conducted Emission Expanded Uncertainty = 2.23dB, k=2

Radiated emission expanded uncertainty = 3.08dB, k=2

(9kHz-30MHz)

Radiated emission expanded uncertainty = 4.42dB, k=2

(30MHz-1000MHz)

Radiated emission expanded uncertainty = 4.06dB, k=2

(Above 1GHz)



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2. DESCRIPTION OF VERSION

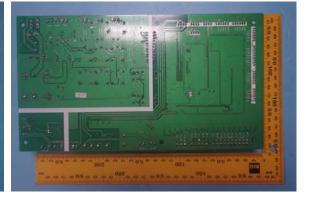
| Edition No. | Date of Rev. | Summary | Report No. |
|-------------|------------------|---------------------|-------------|
| REV.1 | November 4, | Original Report | ATE20172033 |
| | 2017 | | |
| REV.2 | January 17, 2018 | Replace motherboard | ATE20172033 |
| | | | 002 |

Remark for Rev. 2

- 1. This report is an additional version with original report number ATE20172033. The different with original report please see the above table of REV.2.
- 2. Compared with the original report ATE20172033, sample of the new provision is exactly the same as the old one. Through evaluation of the above difference, Conducted Emission and Radiated emission (Below 1GHz) is need to retest, portion test data and test pictures would refer to ATE20172033.
- 3. This report is based on report of ATE20172033.
- 4. For testing items not reflected in this report, Please refer to the original report.

Original motherboard





Replace motherboard





Note: The circuits and software programs of two motherboards are differently.



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3. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

| Kind of equipment | Manufacturer | Туре | S/N | Calibrated dates | Calibrated until |
|--------------------|---------------------------|---|------------|------------------|------------------|
| EMI Test Receiver | Rohde&Schwarz | ESCS30 | 100307 | Jan. 7, 2017 | 1 Year |
| EMI Test Receiver | Rohde&Schwarz | ESPI3 | 101526/003 | Jan. 7, 2017 | 1 Year |
| Spectrum Analyzer | Agilent | E7405A | MY45115511 | Jan. 7, 2017 | 1 Year |
| Pre-Amplifier | Rohde&Schwarz | CBLU118354 0-01 | 3791 | Jan. 7, 2017 | 1 Year |
| Loop Antenna | Schwarzbeck | FMZB1516 | 1516131 | Jan. 13, 2017 | 1 Year |
| Bilog Antenna | Schwarzbeck | VULB9163 | 9163-323 | Jan. 13, 2017 | 1 Year |
| Horn Antenna | Schwarzbeck | BBHA9120D | 9120D-655 | Jan. 13, 2017 | 1 Year |
| Horn Antenna | Schwarzbeck | BBHA9170 | 9170-359 | Jan. 13, 2017 | 1 Year |
| LISN | Rohde&Schwarz | ESH3-Z5 | 100305 | Jan. 7, 2017 | 1 Year |
| LISN | Schwarzbeck | NSLK8126 | 8126431 | Jan. 7, 2017 | 1 Year |
| Highpass Filter | Wainwright Instruments | WHKX3.6/18 G-10SS | N/A | Jan. 7, 2017 | 1 Year |
| Band Reject Filter | Wainwright Instruments | WRCG2400/2 485-2375/2510 -60/11SS | N/A | Jan. 7, 2017 | 1 Year |





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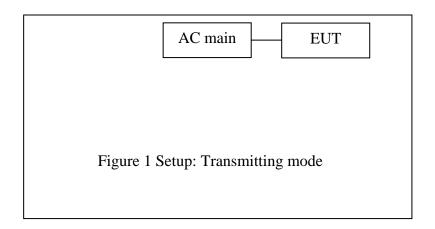
4. OPERATION OF EUT DURING TESTING

4.1. Operating Mode

The mode is used: BLE Transmitting mode

Low Channel: 2402MHz Middle Channel: 2440MHz High Channel: 2480MHz

4.2. Configuration and peripherals





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5. TEST PROCEDURES AND RESULTS

| FCC Rules | Description of Test | Result |
|-------------------------------------|---------------------------------------|--|
| Section 15.247(a)(2) | 6dB Bandwidth Test | refer to the original report |
| Section 15.247(e) | Power Spectral Density Test | refer to the original report |
| Section 15.247(b)(3) | Maximum Peak Output Power Test | refer to the original report |
| Section 15.247(d) | Band Edge Compliance Test | refer to the original report |
| Section 15.247(d) Section 15.209 | Radiated Spurious Emission Test | refer to the original report(Above 1GHz test data) |
| Section 15.207 | AC Power Line Conducted Emission Test | Compliant |
| Section 15.203 | Antenna Requirement | refer to the original report |

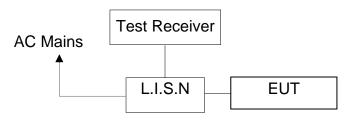


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6. POWER LINE CONDUCTED MEASUREMENT

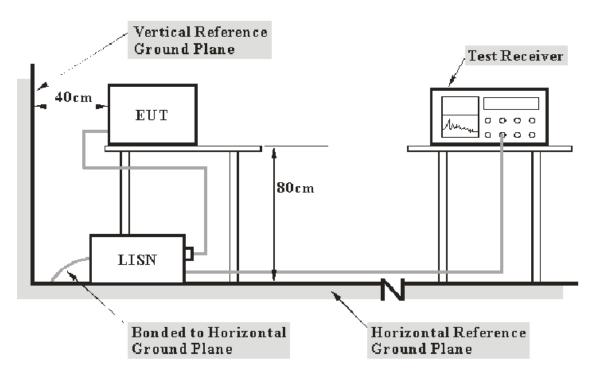
6.1.Block Diagram of Test

6.1.1.Block diagram of connection between the EUT and simulators



(EUT: Massage Chair)

6.1.2.Test System Setup



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.



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6.2. Power Line Conducted Emission Measurement Limits

| Frequency | Limit dB(μV) | | | | |
|--------------|------------------|---------------|--|--|--|
| (MHz) | Quasi-peak Level | Average Level | | | |
| 0.15 - 0.50 | 66.0 – 56.0 * | 56.0 – 46.0 * | | | |
| 0.50 - 5.00 | 56.0 | 46.0 | | | |
| 5.00 - 30.00 | 60.0 | 50.0 | | | |

NOTE1: The lower limit shall apply at the transition frequencies.

NOTE2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

6.3. Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

6.4. Operating Condition of EUT

- 6.4.1. Setup the EUT and simulator as shown as Section 5.1.
- 6.4.2. Turn on the power of all equipment.
- 6.4.3.Let the EUT work in test mode and measure it.

6.5.Test Procedure

The EUT is put on the plane 0.1 m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 500hm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.



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6.6.Data Sample

| Frequency (MHz) | Transducer value (dB) | QuasiPeak Level | Average Level | QuasiPeak Limit | Average Limit | QuasiPeak Margin (dB) | Average Margin (dB) | Remark (Pass/Fail) |
|--------------------|-----------------------------|--------------------|------------------|--------------------|------------------|-----------------------------|---------------------------|-----------------------|
| | (ub) | (dBμV) | (dBμV) | (dBμV) | (dBμV) | (ub) | (ub) | |
| XX.XXX | 11.0 | 36.7 | 34.0 | 56.0 | 46.0 | 19.3 | 12.0 | Pass |

Frequency(MHz) = Emission frequency in MHz Transducer value(dB) = Insertion loss of LISN + Cable Loss Level(dB μ V) = Quasi-peak Reading/Average Reading + Transducer value Limit (dB μ V) = Limit stated in standard Margin = Limit (dB μ V) - Level (dB μ V)

Calculation Formula:





6.7. Power Line Conducted Emission Measurement Results **PASS.**

The frequency range from 150kHz to 30MHz is checked.

| Test mode : BT communicating(AC 120V/60Hz) EUT mode : EC-622B | | | | | | | | | | | | |
|---|--|--|----------------------------------|--|----------------------------------|----------------------------------|--|--|--|--|--|--|
| MEASUREMENT | | | 918-02 | _fin" | | | | | | | | |
| 2018-1-15 9:2 Frequency MHz | 0 Level dBμV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE | | | | | |
| 0.172000 0.418000 2.000000 2.873000 5.442500 28.518500 | 52.40 38.60 36.00 39.40 34.90 30.90 | 10.5 11.3 11.7 11.7 11.8 12.0 | 65 58 56 56 60 60 | 12.5 18.9 20.0 16.6 25.1 29.1 | ~ | N N N N N | GND GND GND GND GND GND | | | | | |
| MEASUREMENT RESULT: "FS-0918-02_fin2" | | | | | | | | | | | | |
| 2018-1-15 9:20 Frequency MHz | | | Limit dBµV | Margin dB | Detector | Line | PE | | | | | |
| 0.178000 0.532000 2.103500 3.215000 5.442500 18.677000 | 38.50 26.30 27.30 29.80 27.50 29.10 | 10.5 11.5 11.7 11.7 11.8 11.9 | 55 46 46 46 50 50 | 16.1 19.7 18.7 16.2 22.5 20.9 | AV AV AV AV AV | N N N N N | GND GND GND GND GND GND | | | | | |
| MEASUREMENT | RESULT | : "FS-0 | 918-01 | _fin" | | | | | | | | |
| 2018-1-15 9:2 Frequency MHz | 7 Level dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE | | | | | |
| 0.176000 0.406000 1.866000 3.417500 5.465000 28.545500 | 54.50 39.00 35.80 37.70 32.10 32.20 | 10.5 11.3 11.7 11.7 11.8 12.0 | 65 58 56 56 60 60 | 10.2 18.7 20.2 18.3 27.9 27.8 | QP QP QP QP QP QP | L1 L1 L1 L1 L1 | GND GND GND GND GND GND | | | | | |
| MEASUREMENT | RESULT | : "FS-0 | 918-01 | _fin2" | | | | | | | | |
| 2018-1-15 9:2 Frequency MHz | 7 Level dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE | | | | | |
| 0.198000 0.526000 2.058500 3.147500 5.465000 18.672500 | 34.60 27.40 27.00 29.50 25.20 28.70 | 10.6 11.5 11.7 11.7 11.8 11.9 | 54 46 46 46 50 | 19.1 18.6 19.0 16.5 24.8 21.3 | AV AV AV AV AV | L1 L1 L1 L1 L1 L1 | GND GND GND GND GND GND | | | | | |

Emissions attenuated more than 20 dB below the permissible value are not reported.

The spectral diagrams are attached as below.





ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Massage Chair M/N:EC-622B

Manufacturer: COMFORT

Operating Condition: BT communicating Test Site: 2#Shielding Room

Operator: DING

Test Specification: N 120V/60Hz

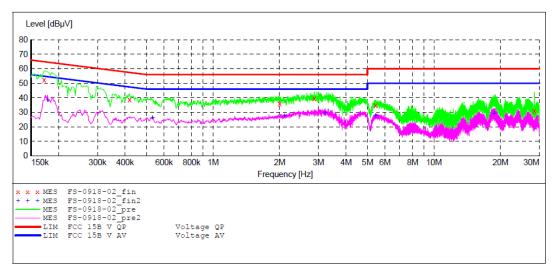
Comment: Report NO.:ATE20172033 002 2018-1-15 / 9:19:08 Start of Test:

SCAN TABLE: "V 150K-30MHz fin"
Short Description: _SUB_STD_VTERM2 1.70

Step IF Start Stop Detector Meas. Transducer Time Bandw.

Frequency Frequency Width 150.0 kHz 30.0 MHz 4.5 kHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)

Average



MEASUREMENT RESULT: "FS-0918-02 fin"

| 2 | 018-1-15 9:20 Frequency MHz | | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE |
|---|-----------------------------------|-------|--------------|---------------|--------------|----------|------|-----|
| | 0.172000 | 52.40 | 10.5 | 65 | 12.5 | QP | N | GND |
| | 0.418000 | 38.60 | 11.3 | 58 | 18.9 | QP | N | GND |
| | 2.000000 | 36.00 | 11.7 | 56 | 20.0 | QP | N | GND |
| | 2.873000 | 39.40 | 11.7 | 56 | 16.6 | QP | N | GND |
| | 5.442500 | 34.90 | 11.8 | 60 | 25.1 | QP | N | GND |
| | 28.518500 | 30.90 | 12.0 | 60 | 29.1 | QΡ | N | GND |

MEASUREMENT RESULT: "FS-0918-02 fin2"

| 2018-1-15 9:20 Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE |
|---|--|--------------------------------------|----------------------------|--|----------------------------|-----------------------|--|
| 0.178000 0.532000 2.103500 3.215000 5.442500 18.677000 | 38.50 26.30 27.30 29.80 27.50 29.10 | 10.5 11.5 11.7 11.7 11.8 | 55 46 46 46 50 | 16.1 19.7 18.7 16.2 22.5 20.9 | AV AV AV AV AV | N N N N N | GND GND GND GND GND GND |



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ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Massage Chair M/N:EC-622B

Manufacturer: COMFORT

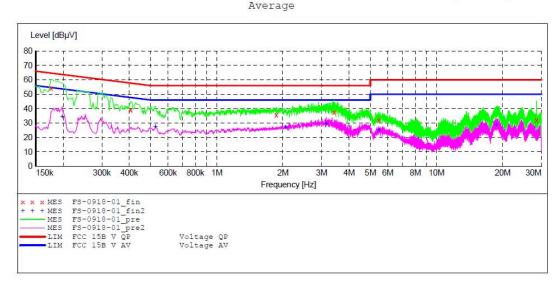
Operating Condition: BT communicating Test Site: 2#Shielding Room Operator: DING

Test Specification: L 120V/60Hz

Report NO.: ATE20172033 002 Comment: Start of Test: 2018-1-15 / 9:25:30

SCAN TABLE: "V 150K-30MHz fin"
Short Description: SUB_STD_VTERM2 1.70

Start Stop Step Detector Meas. IF Transducer Frequency Frequency Width 150.0 kHz 30.0 MHz 4.5 kHz Time Bandw. QuasiPeak 1.0 s LISN (ESH3-Z5) 4.5 kHz 9 kHz



MEASUREMENT RESULT: "FS-0918-01_fin"

| 2018-1-15 9:27 Frequency MHz | | Transd dB | Limit dBµV | Margin dB | Detector | Line | PE |
|------------------------------------|----------------|--------------|---------------|--------------|----------|----------|------------|
| 0.176000 0.406000 | 54.50 39.00 | 10.5 | 65 58 | 10.2 18.7 | QP | L1 L1 | GND GND |
| 1.866000 | 35.80 | 11.7 | 56 | 20.2 | QP QP | L1 | GND |
| 3.417500 5.465000 | 37.70 32.10 | 11.7 11.8 | 56 60 | 18.3 | QP OP | L1 L1 | GND GND |
| 28.545500 | 32.20 | 12.0 | 60 | 27.8 | QP | L1 | GND |

MEASUREMENT RESULT: "FS-0918-01 fin2"

| 2018-1-15 9: Frequency | 27 Level | Transd | Limit | Margin | Detector | Line | PE |
|---------------------------|-------------------|--------|-------|--------|----------|------|-----|
| MHz | dB _µ V | dB | dBµV | dB | Decector | птие | ГL |
| 0.198000 | 34.60 | 10.6 | 54 | 19.1 | AV | L1 | GND |
| 0.526000 | 27.40 | 11.5 | 46 | 18.6 | AV | L1 | GND |
| 2.058500 | 27.00 | 11.7 | 46 | 19.0 | AV | L1 | GND |
| 3.147500 | 29.50 | 11.7 | 46 | 16.5 | AV | L1 | GND |
| 5.465000 | 25.20 | 11.8 | 50 | 24.8 | AV | L1 | GND |
| 18.672500 | 28.70 | 11.9 | 50 | 21.3 | AV | L1 | GND |

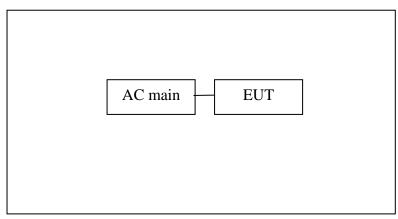




7. RADIATED SPURIOUS EMISSION TEST

7.1.Block Diagram of Test Setup

7.1.1.Block diagram of connection between the EUT and peripherals

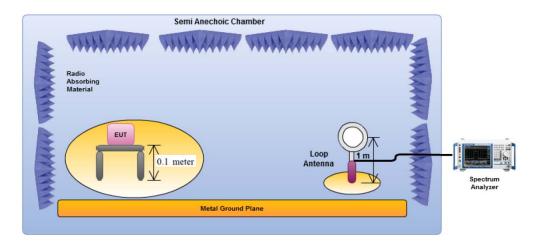


Setup: Transmitting mode

(EUT: Massage Chair)

7.1.2.Semi-Anechoic Chamber Test Setup Diagram

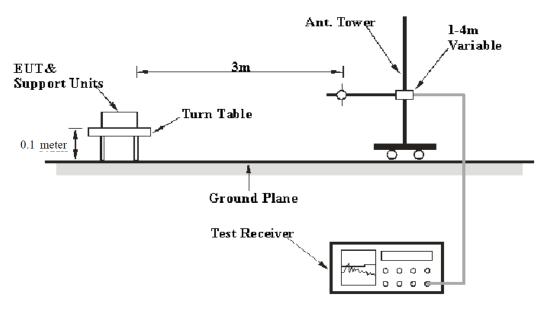
Below 30MHz



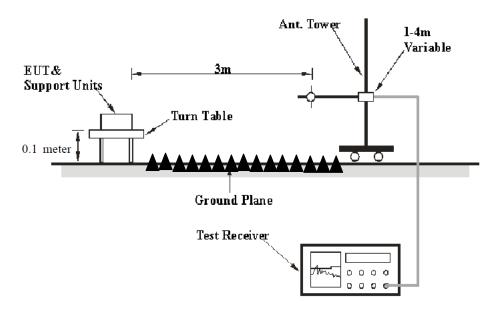




Below 1GHz:



Above 1GHz:



7.2. The Limit For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging



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over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

7.3.Restricted bands of operation

7.3.1.FCC Part 15.205 Restricted bands of operation

(a) Except as shown in paragraph (d) of this section, Only spurious emissions are permitted in any of the frequency bands listed below:

| permitted in any of the frequency bands listed below: | | | | | | | | | | |
|---|---------------------|---------------|---------------|--|--|--|--|--|--|--|
| MHz | MHz | MHz | GHz | | | | | | | |
| 0.090-0.110 | 16.42-16.423 | 399.9-410 | 4.5-5.15 | | | | | | | |
| ¹ 0.495-0.505 | 16.69475-16.69525 | 608-614 | 5.35-5.46 | | | | | | | |
| 2.1735-2.1905 | 16.80425-16.80475 | 960-1240 | 7.25-7.75 | | | | | | | |
| 4.125-4.128 | 25.5-25.67 | 1300-1427 | 8.025-8.5 | | | | | | | |
| 4.17725-4.17775 | 37.5-38.25 | 1435-1626.5 | 9.0-9.2 | | | | | | | |
| 4.20725-4.20775 | 73-74.6 | 1645.5-1646.5 | 9.3-9.5 | | | | | | | |
| 6.215-6.218 | 74.8-75.2 | 1660-1710 | 10.6-12.7 | | | | | | | |
| 6.26775-6.26825 | 108-121.94 | 1718.8-1722.2 | 13.25-13.4 | | | | | | | |
| 6.31175-6.31225 | 123-138 | 2200-2300 | 14.47-14.5 | | | | | | | |
| 8.291-8.294 | 149.9-150.05 | 2310-2390 | 15.35-16.2 | | | | | | | |
| 8.362-8.366 | 156.52475-156.52525 | 2483.5-2500 | 17.7-21.4 | | | | | | | |
| 8.37625-8.38675 | 156.7-156.9 | 2690-2900 | 22.01-23.12 | | | | | | | |
| 8.41425-8.41475 | 162.0125-167.17 | 3260-3267 | 23.6-24.0 | | | | | | | |
| 12.29-12.293 | 167.72-173.2 | 3332-3339 | 31.2-31.8 | | | | | | | |
| 12.51975-12.52025 | 240-285 | 3345.8-3358 | 36.43-36.5 | | | | | | | |
| 12.57675-12.57725 | 322-335.4 | 3600-4400 | $\binom{2}{}$ | | | | | | | |
| 13.36-13.41 | | | | | | | | | | |

¹Until February 1, 1999, this restricted band shall be 0.490-0.510

(b) Except as provided in paragraphs (d) and (e), the field strength of emission appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, Compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

7.4. Configuration of EUT on Measurement

The equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

²Above 38.6



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7.5. Operating Condition of EUT

- 7.5.1. Setup the EUT and simulator as shown as Section 10.1.
- 7.5.2. Turn on the power of all equipment.
- 7.5.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

7.6.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.1 meter high above ground(Below 1GHz). The EUT and its simulators are placed on a turntable, which is 0.1 meter high above ground(Above 1GHz). The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the EUT location must be manipulated according to ANSI C63.10:2013 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

The bandwidth of test receiver is set at 9 kHz in below 30MHz, and set at 120 kHz in 30-1000MHz, and 1MHz in above 1000MHz.

The frequency range from 9 kHz to 25GHz is checked.

The final measurement in band 9-90 kHz, 110-490 kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss - Amplifier Gain



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7.7.Data Sample

| Frequency | Reading | Factor | Result | Limit | Margin | Remark |
|-----------|---------|--------|----------|----------|--------|--------|
| (MHz) | (dBμv) | (dB/m) | (dBμv/m) | (dBμv/m) | (dB) | |
| XX.XXX | 42.80 | -11.72 | 31.08 | 40.00 | -8.92 | QP |

Frequency(MHz) = Emission frequency in MHz

Reading(dB_μv) = Uncorrected Analyzer/Receiver reading

Factor (dB/m) = Antenna factor + Cable Loss - Amplifier gain

Result($dB\mu\nu/m$) = Reading($dB\mu\nu$) + Factor(dB/m)

Limit (dB μ v/m) = Limit stated in standard

Margin (dB) = Result(dB μ v/m) - Limit (dB μ v/m)

QP = Quasi-peak Reading

Calculation Formula:

Margin(dB) = Result (dB μ V/m)–Limit(dB μ V/m)

Result($dB\mu V/m$)= Reading($dB\mu V$)+ Factor(dB/m)

The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the limit.

7.8. The Field Strength of Radiation Emission Measurement Results PASS.

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

- 2. *: Denotes restricted band of operation.
- 3. The radiation emissions from 9kHz-30MHz and 18-26.5GHz are not reported, because the test values lower than the limits of 20dB.
- 4. Above 1GHz test data please refer to the original report.



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> Site: 1# Chamber Tel:+86-0755-26503290

Fax:+86-0755-26503396



Job No.: DING #2068

ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China

Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 18/01/15/ Time: 12/29/08

Engineer Signature: DING

Distance: 3m

Standard: FCC Class B 3M Radiated

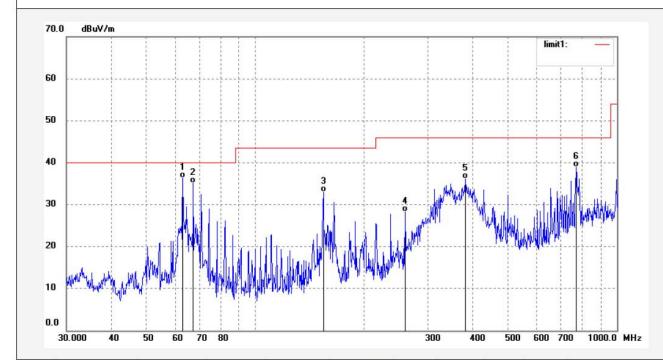
Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Massage Chair Mode: TX 2402MHz

Model: EC-622B Manufacturer: COMFORT

Note: Report NO.:ATE20172033 002



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|----------------|------------------|----------------|--------------------|-------------------|----------------|----------|-------------|------------------|--------|
| 1 | 62.9640 | 58.92 | -22.65 | 36.27 | 40.00 | -3.73 | QP | | | |
| 2 | 67.3109 | 57.91 | -22.76 | 35.15 | 40.00 | -4.85 | QP | | | |
| 3 | 154.2428 | 54.89 | -21.95 | 32.94 | 43.50 | -10.56 | QP | | | |
| 4 | 259.4433 | 45.83 | -17.60 | 28.23 | 46.00 | -17.77 | QP | | | |
| 5 | 380.5126 | 50.20 | -14.14 | 36.06 | 46.00 | -9.94 | QP | | | |
| 6 | 771.0475 | 45.26 | -6.39 | 38.87 | 46.00 | -7.13 | QP | | | |



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ACCURATE TECHNOLOGY CO., LTD.

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Polarization: Horizontal

Power Source: AC 120V/60Hz

Date: 18/01/15/ Time: 12/30/37

Engineer Signature: DING

Distance: 3m

Job No.: DING #2069

Standard: FCC Class B 3M Radiated

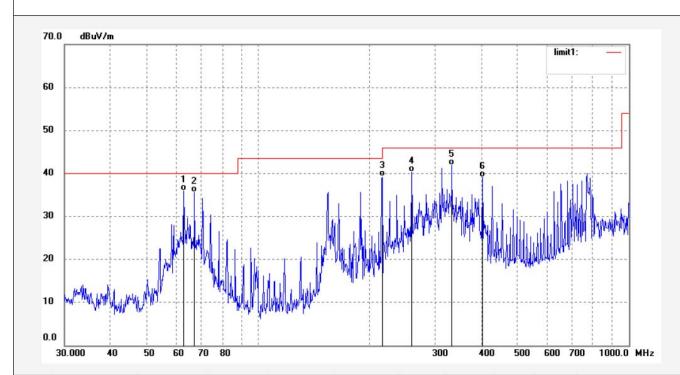
Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Massage Chair Mode: TX 2402MHz Model: EC-622B

Manufacturer: COMFORT

Note: Report NO.:ATE20172033 002



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|----------------|------------------|----------------|--------------------|-------------------|----------------|----------|-------------|------------------|--------|
| 1 | 62.9640 | 58.70 | -22.65 | 36.05 | 40.00 | -3.95 | QP | | | |
| 2 | 67.3109 | 58.29 | -22.76 | 35.53 | 40.00 | -4.47 | QP | | | |
| 3 | 216.1196 | 57.62 | -18.42 | 39.20 | 46.00 | -6.80 | QP | | | |
| 4 | 259.4433 | 57.87 | -17.60 | 40.27 | 46.00 | -5.73 | QP | | | |
| 5 | 332.9534 | 57.06 | -15.22 | 41.84 | 46.00 | -4.16 | QP | 3 | | |
| 6 | 402.5168 | 53.09 | -13.94 | 39.15 | 46.00 | -6.85 | QP | 3 | | |



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Job No.: DING #2070

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Massage Chair Mode: TX 2440MHz Model: EC-622B

Manufacturer: COMFORT

Note: Report NO.:ATE20172033 002

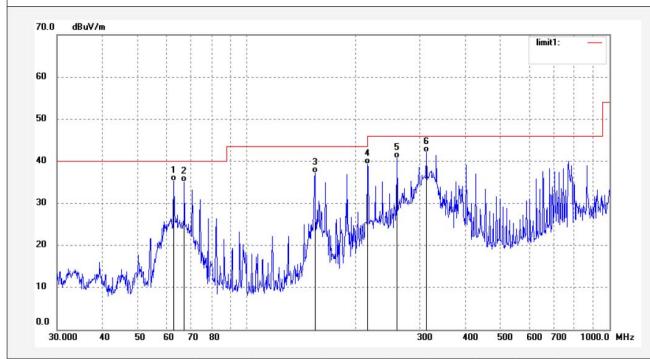
Polarization: Horizontal

Power Source: AC 120V/60Hz

Date: 18/01/15/ Time: 12/31/34

Engineer Signature: DING

Distance: 3m



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|----------------|------------------|----------------|--------------------|-------------------|----------------|----------|-------------|------------------|--------|
| 1 | 62.9640 | 57.89 | -22.65 | 35.24 | 40.00 | -4.76 | QP | | | |
| 2 | 67.3109 | 57.79 | -22.76 | 35.03 | 40.00 | -4.97 | QP | | | |
| 3 | 154.2427 | 59.11 | -21.95 | 37.16 | 43.50 | -6.34 | QP | | | |
| 4 | 215.3616 | 57.69 | -18.43 | 39.26 | 43.50 | -4.24 | QP | | | |
| 5 | 259.4433 | 58.37 | -17.60 | 40.77 | 46.00 | -5.23 | QP | | | |
| 6 | 312.5482 | 58.15 | -15.99 | 42.16 | 46.00 | -3.84 | QP | | | |



Site: 1# Chamber

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ACCURATE TECHNOLOGY CO., LTD.

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Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 18/01/15/ Time: 12/32/44

Engineer Signature: DING

Distance: 3m

Job No.: DING #2071

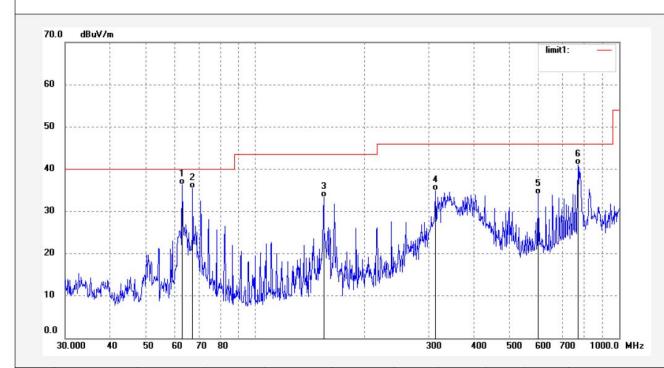
Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Massage Chair Mode: TX 2440MHz Model: EC-622B Manufacturer: COMFORT

Note: Report NO.:ATE20172033 002



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|----------------|------------------|----------------|--------------------|-------------------|----------------|----------|-------------|------------------|--------|
| 1 | 62.9640 | 58.91 | -22.65 | 36.26 | 40.00 | -3.74 | QP | | | |
| 2 | 67.3109 | 58.18 | -22.76 | 35.42 | 40.00 | -4.58 | QP | | | |
| 3 | 154.2428 | 55.29 | -21.95 | 33.34 | 43.50 | -10.16 | QP | | | |
| 4 | 312.5482 | 50.90 | -15.99 | 34.91 | 46.00 | -11.09 | QP | | | |
| 5 | 598.7066 | 44.02 | -9.95 | 34.07 | 46.00 | -11.93 | QP | | | |
| 6 | 771.0475 | 47.36 | -6.39 | 40.97 | 46.00 | -5.03 | QP | | | |



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ACCURATE TECHNOLOGY CO., LTD.

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Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 18/01/15/ Time: 12/33/45

Engineer Signature: DING

Distance: 3m

Job No.: DING #2072

Standard: FCC Class B 3M Radiated

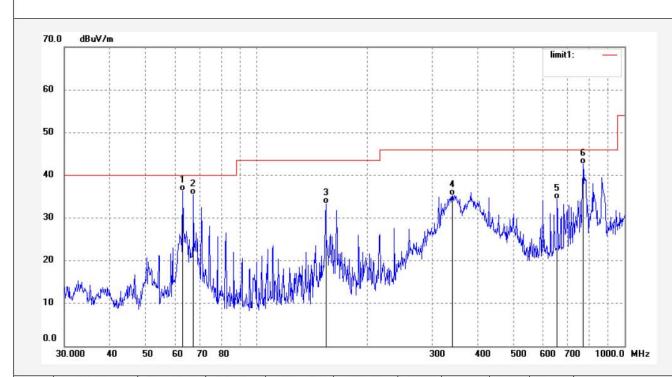
Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Massage Chair Mode: TX 2480MHz Model: EC-622B

Manufacturer: COMFORT

Note: Report NO.:ATE20172033 002



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|----------------|------------------|-------------|--------------------|-------------------|----------------|----------|-------------|------------------|--------|
| 1 | 62.9640 | 58.91 | -22.65 | 36.26 | 40.00 | -3.74 | QP | | | |
| 2 | 67.3109 | 58.18 | -22.76 | 35.42 | 40.00 | -4.58 | QP | | | |
| 3 | 154.2427 | 55.29 | -21.95 | 33.34 | 43.50 | -10.16 | QP | | | |
| 4 | 340.0473 | 50.35 | -15.02 | 35.33 | 46.00 | -10.67 | QP | | | |
| 5 | 655.9765 | 43.06 | -8.74 | 34.32 | 46.00 | -11.68 | QP | | | |
| 6 | 771.0475 | 48.95 | -6.39 | 42.56 | 46.00 | -3.44 | QP | | | |



Site: 1# Chamber

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ACCURATE TECHNOLOGY CO., LTD.

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Polarization: Horizontal

Power Source: AC 120V/60Hz

Date: 18/01/15/ Time: 12/34/26

Engineer Signature: DING

Distance: 3m

Job No.: DING #2073

Standard: FCC Class B 3M Radiated

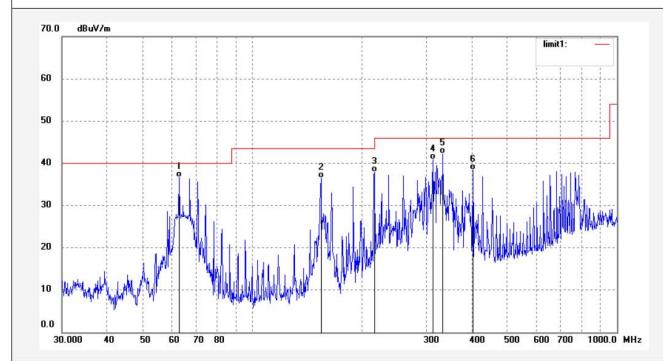
Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Massage Chair Mode: TX 2480MHz Model: EC-622B

Manufacturer: COMFORT

Note: Report NO.:ATE20172033 002



| No. | Freq. (MHz) | Reading (dBuV/m) | Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Degree (deg.) | Remark |
|-----|----------------|------------------|----------------|--------------------|-------------------|----------------|----------|-------------|------------------|--------|
| 1 | 62.9640 | 59.32 | -22.65 | 36.67 | 40.00 | -3.33 | QP | | | |
| 2 | 154.2428 | 58.43 | -21.95 | 36.48 | 43.50 | -7.02 | QP | | | |
| 3 | 216.1196 | 56.27 | -18.42 | 37.85 | 46.00 | -8.15 | QP | | | |
| 4 | 312.5482 | 56.92 | -15.99 | 40.93 | 46.00 | -5.07 | QP | | | |
| 5 | 332.9536 | 57.56 | -15.22 | 42.34 | 46.00 | -3.66 | QP | | | |
| 6 | 402.5167 | 52.30 | -13.94 | 38.36 | 46.00 | -7.64 | QP | | | |

----- THE END OF TEST REPORT -----